

PATENT

hereby certify that on the date specified below, this correspondence is being deposited with the United States Postal Service as first-class mail in an envelope addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

November 1, 2005  
Date

Ayesha J. Shaikh  
Ayesha J. Shaikh

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Appl. No. : 10/618,090

Confirmation No. : 3808

Applicants : Mark A. Moehring, Joseph H. Farnsworth, Ajay Philip Zachariah and  
Henry James Baron, Jr.

Filed : July 10, 2003

Attorney Docket No.: 33354/US

Art Unit : 3737

Customer No. : 27,076

Examiner : Ali M. Imam

Title : DOPPLER ULTRASOUND METHOD AND APPARATUS FOR MONITORING  
BLOOD FLOW AND HEMODYNAMICS

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**INFORMATION DISCLOSURE STATEMENT**

Mail Stop Amendment  
Commissioner for Patents  
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Sir:

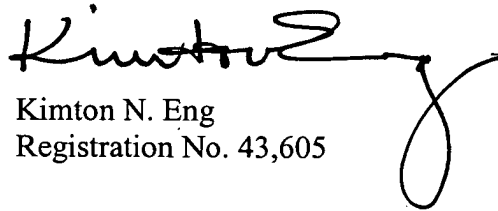
In accordance with 37 C.F.R. §§ 1.56 and 1.97 through 1.98, applicants wish to make known to the Patent and Trademark Office the references set forth on the attached form PTO-1449. Copies of the cited foreign patent and non-patent literature references, as required under 37 C.F.R. § 1.98(a)(2), are enclosed. Copies of the cited U.S. patents and U.S. patent application publications will not be submitted herewith in accordance with the waiver by the Office of the requirement under 37 C.F.R. § 1.98(a)(2)(i) for U.S. national patent applications filed after June 30, 2003. Although the aforesaid references are made known to the Patent and Trademark Office in compliance with applicants' duty to disclose all information they are aware of which is believed relevant to the examination of the above-identified application, applicants believe that their invention is patentable.

A fee of \$180 is submitted in accordance with 37 C.F.R. § 1.97(c). The Commissioner is authorized to charge any other fees which may be required, or credit any overpayment to Deposit Account No. 50-1266. A duplicate copy of this sheet is enclosed.

Please acknowledge receipt of this Information Disclosure Statement and kindly make the cited references of record in the above-identified application.

Respectfully submitted,

DORSEY & WHITNEY LLP

A handwritten signature in black ink, appearing to read "Kimton N. Eng", with a long, sweeping horizontal stroke extending to the right.

Kimton N. Eng  
Registration No. 43,605

KNE:ajs

Enclosures:

- Postcard
- Check
- Fee Transmittal Sheet (+ copy)
- Copy of Information Disclosure Statement
- Form PTO-1449
- Cited References (18)

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FORM PTO-1449  
(REV. 7-80)U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICEATTY. DOCKET NO.  
33354/USAPPLICATION NO.  
10/618,090

## INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

APPLICANT(S)

Mark A. Moehring et al.

FILING DATE

July 10, 2003

GROUP ART UNIT

3737

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA	4,014,206	03/29/77	Taylor	73	19	
	AB	4,152,928	05/08/79	Roberts	73	61 R	
	AC	4,319,580	03/16/82	Colley et al.	128	661	
	AD	4,501,277	02/26/85	Hongo	128	660	
	AE	4,751,929	06/21/88	Hayakawa et al.	128	663	
	AF	4,800,891	01/31/89	Kim	128	661.09	
	AG	4,848,354	07/18/89	Angelsen et al.	128	660.05	
	AH	4,896,674	01/30/90	Seo	128	661.09	
	AI	4,993,417	02/19/91	Seo	128	661.09	
	AJ	5,053,008	10/01/91	Bajaj	604	104	
	AK	5,083,567	01/28/92	Uchibori	128	661.09	
	AL	5,101,828	04/07/92	Welkowitz et al.	128	668	
	AM	5,103,826	04/14/92	Bonnefous	128	661.08	
	AN	5,103,827	04/14/92	Smith	128	661.08	
	AO	5,129,399	07/14/92	Hirama	128	661.01	
	AP	5,148,808	09/22/92	Satake	128	660.05	
	AQ	5,231,573	07/27/93	Takamizawa	364	413.25	
	AR	5,271,404	12/21/93	Corl et al.	128	661.08	
	AS	5,348,015	09/20/94	Moehring et al.	128	661.07	
	AT	5,441,051	08/15/95	Hileman et al.	128	661.08	
	AU	5,476,097	12/19/95	Robinson	128	660.05	
	AV	5,501,223	03/26/96	Washburn et al.	128	661.09	
	AW	5,513,640	05/07/96	Yamazaki et al.	128	661.09	
	AX	Re. 35,371	11/05/96	Seo	128	661.09	

EXAMINER

DATE CONSIDERED

\* EXAMINER: Initial if reference considered, whether or not criteria is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant(s).

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**U.S. PATENT DOCUMENTS**

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	AY	5,615,680	04/01/97	Sano	128	661.09	
	AZ	5,622,173	04/22/97	Bisson et al.	128	661.01	
	BA	5,732,705	03/31/98	Yokoyama et al.	128	660.07	
	BB	5,785,654	07/28/98	Iinuma et al.	600	441	
	BC	5,785,655	07/28/98	Goodsell, Jr. et al.	600	441	
	BD	5,860,927	01/19/99	Sakaguchi et al.	600	453	
	BE	5,882,315	03/16/99	Ji et al.	600	553	
	BF	5,910,118	06/08/99	Kanda et al.	600	455	
	BG	5,913,824	06/22/99	Ogasawara et al.	600	455	
	BH	5,919,139	07/06/99	Lin	600	443	
	BI	5,997,478	12/07/99	Jackson et al.	600	437	
	BJ	6,045,505	04/04/00	Holley et al.	600	441	
	BK	6,196,972 B1	03/06/01	Moehring	600	454	
	BL	6,482,161 B1	11/19/02	Sumanaweera et al.	600	454	
	BM	6,503,202 B1	01/07/03	Hossack et al.	600	454	
	BN	6,524,249 B2	02/25/03	Moehring et al.	600	438	
	BO	6,547,736 B1	04/15/03	Moehring et al.	600	454	
	BP	6,616,611 B1	09/09/03	Moehring	600	454	
	BQ	2005/0075568 A1	04/07/05	Moehring	600	453	

**FOREIGN PATENT DOCUMENTS**

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
	BR	WO 94/06353	03/31/94	PCT			X	
	BS	0 079 453 A1	05/25/83	EP			X	

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FORM PTO-1449 (REV. 7-80)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. 33354/US	APPLICATION NO. 10/618,090
<b>INFORMATION DISCLOSURE STATEMENT</b> <i>(Use several sheets if necessary)</i>		APPLICANT(S) Mark A. Moehring et al.	
		FILING DATE July 10, 2003	GROUP ART UNIT 3737

OTHER PRIOR ART <i>(Including Author, Title, Date, Pertinent Pages, Etc.)</i>	
BT	Aloka-860 Operational Manual. Volume I System Description, Effective S/N: 51M8876 and above. pp. i--15-2 and A-2--A-5.
BU	Aloka Color Doppler Model SSD-860 Cardiovascular Scanner Sales Brochure. Aloka Co., Ltd., Japan.
BV	Demchuk, A.M. et al., "Thrombolysis in Brain Ischemia (TIBI) Transcranial Doppler Flow Grades Predict Clinical Severity, Early Recovery, and Mortality in Patients Treated with Intravenous Tissue Plasminogen Activator", American Heart Association, Inc., January 2001. pp. 89-93.
BW	Duncan, Walter J. <i>Color Doppler in Clinical Cardiology</i> . Philadelphia, W.B. Saunders Company, Harcourt Brace Jovanovich, Inc., 1988. pp. 1-13.
BX	Ferrera, K. et al., "Color Flow Mapping," <i>Ultrasound in Medicine and Biology</i> , Vol. 23, No. 3, 1997, pp. 321-345.
BY	Giller, C.A. et al., "Oscillations in Cerebral Blood Flow Detected with a Transcranial Doppler Index", <i>Journal of Cerebral Blood Flow and Metabolism</i> , Vol. 19, No. 4, April 1999. pp. 452-459.
BZ	Griffith, James M. et al., "An Ultrasound System for Combined Cardiac Imaging and Doppler Blood Flow Measurement in Man", <i>Biomedical Engineering and Instrumentation Branch, Division of Research Services and the Cardiology Branch, National Heart, Lung, and Blood Institute, Maryland</i> , Vol. 57, No. 5, May 1978, pp. 925-930.
CA	Iwase, Masatsugu et al. <i>Clinical Echocardiography</i> . Dordrecht, Kluwer Academic Publishers, 1989. pp. 11-27 and 250-281.
CB	Kremkau, G.W. <i>Doppler Ultrasound, Principles and Instruments</i> . (Philadelphia, W.B. Saunders Company, 1990), pp. 177-211.
CC	Missri, José <i>Clinical Doppler Echocardiography Spectral and Color Flow Imaging</i> . New York, McGraw-Hill, Inc., 1990. pp. 9-27 and 279-303.
CD	Omoto, R. et al., "The Development of Real-Time Two-Dimensional Doppler Echocardiography and Its Clinical Significance in Acquired Valvular Diseases With Special Reference to the Evaluation of Valvular Regurgitation", Reprinted from <i>Japanese Heart Journal</i> , Vol. 25, No. 3, Pages 325-340, May, 1984.
CE	Omoto, R. et al., "Clinical Significance and Prospects of "Real-Time Two-Dimensional Doppler Echocardiography", <i>Color ATLAS of Real-Time Two-Dimensional Doppler Echocardiography</i> , Chapter 1-6, pages 1-44, Shindan-To-Chiryō Co., Ltd. Tokyo 1984.
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<b>OTHER PRIOR ART</b> <i>(Including Author, Title, Date, Pertinent Pages, Etc.)</i>					
	CF	"Operation Manual for Diagnostic Ultrasound Equipment Model SSH-160A (2B730-405E*B)", Toshiba Corporation, 1987, pp. 7-4 -- 7-5, 8-1, 11-1 -- 11-3, 11-12, 12-1, 12-3 and 16-10.			
	CG	Redel, Dierk A. <i>Color Blood Flow Imaging of the Heart</i> . Germany, Springer-Verlag Berlin Heidelberg, 1988. pp. 5-12 and 27-41.			
	CH	Weyman, Arthur E. <i>Principles and Practice of Echocardiography</i> , 2d ed. Philadelphia, Lea & Febiger, 1994. pp. 218-233 and 256-281.			
	CI	Zagzebski, James A., "Essentials of Ultrasound Physics", Mosby, Inc., St. Louis, Missouri, 1996. pp. 46-68 and 109-122.			
	CJ				
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	CQ				
	CR				
	CS				
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